

### **REMARKS/ARGUMENTS**

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter which Applicants regard as the invention.

Claims 6 and 11-17 were rejected under 35 U.S.C. 102(b) over U.S. Patent No. 5,604,433 to Theus et al. (hereinafter "Theus"). Claim 6 has been amended for clarification herein. For the following reasons, claims 6 and 11-17 are patentable over the cited reference.

A magnetic-field sensor of Theus et al. comprises a pair of terminals (9, 10) which does not output the voltage across the ends of any one of switches (12, 12') regardless of whether the number of condensers (11, 11') is one or two. A magnetic-field sensor of Theus et al. outputs the sum of the output current of an amplifier (7) and the output current of the other amplifier (8) corresponding to the stored voltage of the condenser (11, 11') from a pair of terminals (9, 10). It comprises two amplifiers (7, 8).

In contrast, a magnetic field sensor in claim 6 of the present invention comprises a pair of terminals (20, 21) which outputs the voltage across the end of a switch (5). It has different configuration from that of Theus et al. A magnetic field sensor of the present invention outputs the sum of the output voltage of the amplifier (3) and the stored voltage of the condenser (4), both of which are connected in series, as it is easily understood from the configuration defined in the claim. The present invention is based on the utterly different concept from that of Theus et al. A magnetic field sensor of the present invention comprises only one amplifier. The present invention realizes a small and low cost magnetic field sensor.

*Specifically, regarding claims 6 and 12, Theus does not teach "a condenser of which both ends are connected to the pair of output terminals of said amplifier," as required. Likewise, regarding claim 15, Theus does not teach "inputting a signal of the pair of output terminals of the amplifier to both ends of a condenser," as required.*

Initially, there appears to be some confusion surrounding the term "condenser." The Examiner cites the evaluating facility (6) of Theus as disclosing the condenser of the present claims. One of ordinary skill in the art of electrical devices would understand that the term "condenser" refers to a capacitor.<sup>1</sup>

Thus, the disclosure of Theus contains only two condensers, referred to as capacitors (11, 11') and shown in Fig. 1. Further, Theus discloses only two amplifiers having a pair of output terminals, a first transconductance amplifier (7) and a second transconductance amplifier (8)<sup>2</sup>. *Neither of the capacitors (11, 11') in Theus has both of its ends connected to the pair of output terminals of either of the amplifiers (7, 8), as in claims 6 and 12. Likewise, neither of the pairs of output terminals of the amplifiers (7, 8) in Theus inputs a signal to both ends of either of the capacitors (11, 11'), as in claim 15. Rather, the capacitors (11, 11') are each connected at one end to one of the two inputs of the second transconductance amplifier (8).*

Further, regarding claims 6 and 12, Theus does not teach "a pair of output terminals which outputs a voltage across the ends of said switch," as required. Specifically, Theus does not teach

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<sup>1</sup>For the purpose of clarification, Applicant refers to the McGraw-Hill Dictionary of Physics and Mathematics (1978):

**capacitor** [ELEC] A device which consists essentially of two conductors (such as parallel metal plates) insulated from each other by a dielectric and which introduces capacitance into a circuit, stores electrical energy, blocks the flow of direct current, and permits the flow of alternating current to a degree dependent on the capacitor's capacitance and the current frequency. Symbolized C. Also known as condenser; electrical condenser. (emphasis added).

<sup>2</sup>The only other "amplifier" disclosed in Theus, a comparator (13), has only a single output and thus does not satisfy the "pair of output terminals" limitation of claims 6, 12 and 15.

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providing a pair of output terminals for outputting a voltage across the first switch (12). Likewise, Theus does not teach a pair of output terminals for outputting a voltage across the second switch (12'). Similarly, regarding claim 15, Theus does not teach that "a signal across the other end of the condenser and the other output terminal of the amplifier is outputted to a second pair of output terminals," as required.

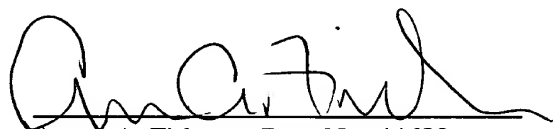
Since every limitation of the claim is not taught by Theus, claims 6, 12 and 15 and their respective dependent claims 11, 13, 14, 16 and 17 are not anticipated by the prior art of record.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 33216.

Respectfully submitted,

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